

REMARKS

Claims 1-9 remain in the application and have been amended hereby.

As will be noted from the Declaration, Applicants are citizens and residents of Japan and this application originated there.

Accordingly, the amendments made to the specification are provided to place the application in idiomatic English, and the claims are amended to place them in better condition for examination.

An early and favorable examination on the merits is earnestly solicited.

Respectfully submitted,
COOPER & DUNHAM LLP



Jay H. Maioli
Reg. No. 27, 213

JHM:jbg

VERSION WITH MARKINGS TO SHOW CHANGES MADE
IN THE ABSTRACT OF THE DISCLOSURE

Please amend the Abstract by rewriting same to read as follows.

A wireless transmission apparatus and a wireless transmission method capable of performing simple transmission control [are provided. As], in which an information transmission flow control method, instead of reporting vacant-buffer information from a receiving destination apparatus, an information transmission-source apparatus permits the transmission of a packet up to a predetermined transmission window size from the packet for which acknowledgement has not been received from an information receiving destination, and the transmission of a packet exceeding that transmission window size is inhibited. As a result, if the packet is within that transmission window size, even if the information receiving destination has not confirmed the reception of the [ACK] acknowledgement (ACK) information, the packet is transmitted unconditionally. Furthermore, a transmission pointer and an ACK receiving pointer are provided, and even if acknowledgement is not received, control is performed using [that] the transmission window size in which transmission is possible.

IN THE CLAIMS

Please amend claims 1-9 by rewriting same to read as follows.

--1. (Amended) A wireless transmission method for transmitting packets of asynchronous information to a wireless transmission apparatus of an information transmission destination from a wireless transmission apparatus of an information transmission source in a wireless network formed using a plurality of transmission apparatuses which are communication stations, said wireless transmission method comprising the steps of:

in said wireless transmission apparatus of the information transmission source,

dividing asynchronous information to be transmitted from a high order layer into packets in sequence at a predetermined fragment size when the asynchronous information is received;

adding a sequence number [for] to each of said packets and buffering the packets in a transmission buffer; and

transmitting said [packetized information] packets to said wireless transmission apparatus of the information transmission destination under [the control of] a predetermined access control.

--2. (Amended) [A] The wireless transmission method according to Claim 1, further comprising the steps of:

writing the [most] a recent sequence number buffered in said transmission buffer in a buffer pointer; and

adding a sequence number starting from [the] a value of said buffer pointer when asynchronous information is next [packetized] divided into packets.

--3. (Amended) [A] The wireless transmission method according to Claim 1, further comprising:

writing [said buffered] a most recent sequence number buffered in said transmission buffer in [the] a buffer pointer; and

storing packets up to a value indicated by a total sequence-number space for the packet for which acknowledgement information is received from said wireless transmission apparatus of the information transmission destination minus one, when asynchronous information is next [packetized] divided into packets.

--4. (Amended) A wireless transmission method for transmitting packets of asynchronous information [to a wireless transmission apparatus of an information transmission destination] from a wireless transmission apparatus of an information transmission source to a wireless transmission apparatus of an information transmission destination, returning acknowledgement information of [the] received packets to said wireless

transmission apparatus of the information transmission source [from said wireless transmission apparatus of the information transmission destination] after the packets of asynchronous information [is] are transmitted, and terminating the transmission of the packets of asynchronous information to said wireless transmission apparatus of the information transmission destination from said wireless transmission apparatus of the information transmission source in a wireless network formed using a plurality of transmission apparatuses which are communication stations, said wireless transmission method comprising the step of:

in said wireless transmission apparatus of the information transmission source,

waiting for acknowledgement information to be received from said wireless transmission apparatus of the information transmission destination until a predetermined time elapses after the packets of asynchronous information [is] are transmitted from said wireless transmission apparatus of the information transmission source.

--5. (Amended) A wireless transmission method for transmitting packets of asynchronous information to a wireless transmission apparatus of an information transmission destination from a wireless transmission apparatus of an information transmission source in a

wireless network formed using a plurality of transmission apparatuses which are communication stations, said wireless transmission method comprising the steps of:

in said wireless transmission apparatus of the information transmission source,

providing a predetermined transmission window size;

and

transmitting a packet [if] when said packet is within said transmission window size even [if the] when reception of acknowledgement information from said wireless transmission apparatus of the information transmission destination is not confirmed,

said steps performing transmission control during [information] transmission of the packets of asynchronous information.

--6. (Amended) [A] The wireless transmission method according to Claim 5, wherein said transmission control during [information transmission] the transmission of packets of asynchronous information is used for selection-repeat-resend-type automatic resend request control in which [information on] a packet of asynchronous information which [could be] is received from said wireless transmission apparatus of the information transmission destination is transmitted as acknowledgement [information]

to said wireless transmission apparatus of the information transmission source, and only a packet which has not been received is selected and retransmitted from said wireless transmission apparatus of the information transmission source.

--7. (Amended) A wireless transmission method using selection-repeat-resend-type automatic resend request control in which [information on] a packet of asynchronous information which [could be] is received from said wireless transmission apparatus of the information transmission destination is transmitted as acknowledgement [information] to said wireless transmission apparatus of the information transmission source, and only a packet which has not been received is selected and retransmitted from said wireless transmission apparatus of the information transmission source in a wireless network formed using a plurality of transmission apparatuses which are communication stations, said wireless transmission apparatus comprising:

in said wireless transmission apparatus of the information transmission source,

providing a predetermined transmission window size;

using a low-order bit-map-space area which is two times as large as said transmission window size, and a high-order-bit identification pointer for indicating the

position in the total sequence-number space to which said low-order bit-map-space area corresponds; and

virtually performing transmission control in the total sequence-number space by repeatedly reusing said low-order bit-map-space area and said high-order-bit identification pointer,

said steps performing transmission control during information transmission.

--8. (Amended) A wireless transmission apparatus for performing transmission of asynchronous information under the control of predetermined access control in a wireless network formed using a plurality of transmission apparatuses which are communication stations, said wireless transmission apparatus comprising:

packetizing means for [packetizing] dividing asynchronous information into packets in predetermined information units on said wireless network;

buffering means for buffering said packets in a transmission buffer;

sequence number assigning means for assigning a sequence number for each of said packets;

storage means for storing the most recent sequence number buffered in said buffering means as a buffer pointer; and

sequence number adding means for reading the value of said buffer pointer and adding a sequence number when asynchronous information is next buffered.

--9. (Amended) A wireless transmission apparatus for transmitting information in a wireless network formed using a plurality of transmission apparatuses which are communication stations using selection-repeat-resend-type automatic resend request control in which information on a packet which [could be] is received by a wireless transmission apparatus of an information transmission destination is transmitted as acknowledgement [information] to a wireless transmission apparatus of an information transmission source, and only [the] a packet which has not been received is selected and retransmitted from said wireless transmission apparatus of the information transmission source, said wireless transmission apparatus comprising:

in said wireless transmission apparatus of the information transmission source,

window size setting means for providing a predetermined transmission window size;

low-order bit-map-space area setting means for setting an area which is two times as large as said window size; and

high-order-bit identification pointer setting means for indicating the position in the total sequence-number space to which said low-order bit-map-space area corresponds,

wherein transmission control in the bit-map spaces of the total sequence-number space is virtually performed by repeatedly reusing said low-order bit-map-space area and said high-order-bit identification pointer.

IN THE BACKGROUND OF THE INVENTION

Please amend the Background of the Invention by rewriting page 3, lines 3-10 to read as follows.

This method has been considered for use in combination with a selection-repeat-resend (SR)-type automatic resend request [(ARG)](ARQ) method, in which information on packets which were successfully received by the information receiving destination is transmitted as acknowledgement information to the information transmission source and in which only the packet which has not been received is selected and retransmitted from the information transmission source.